

**HAZARD ANALYSIS FOR WORKING IN COMPUTER ROOMS**  
(11/2020, version 19)

**Description of Work:** Installation, operation, testing, and repair of computing related equipment.  
(Note: This HA is not meant to be job specific. It is meant to cover common safety elements of working in computer rooms. A specific job may require an additional HA, verbal or written. When in doubt, consult your supervisor.)

<b>Step/Phase of Job</b>	<b>Safety Hazard</b>	<b>Precautions/Safety Procedures</b>
Upon starting work within the computer room	Safety Hazards: High Noise Levels from the computer fans and air conditioning units	<b>Hearing protection is advised</b> when working in the Computer Rooms. <b>Hearing protection is required</b> when working 8 or more hours in computer rooms FCC3, GCC B and GCC C.
Lifting equipment	Potential for back injury	Use proper lifting techniques. Seek assistance from others, use carts or equipment lifts provided in room. (Use Tool Loan Form when loaning a tool to a subcontractor.)
Moving computer equipment	Possibility of back strain or load falling and resulting in injury.	Equipment dollies or lifts provided in computer rooms should always be used for moving a computer, disk unit or network switch. Make sure equipment is secure on lift. Do not attempt to lift/move more than 50 lbs without contacting Data Center Operations for assistance.
Inserting or removing computers from racks	Possibility that rack may become unstable and tip or fall causing serious injury.	Check that the rack is steady and that stabilizing feet, if any, are snug to the floor. Do not pull out equipment so as to cause rack to tip. Be especially careful pulling out equipment in the higher bay areas of the cabinet. Do not pull out more than one unit at a time. Be sure

		to use equipment lift for inserting and removing equipment.
Working on equipment in racks	Rails become partially disengaged where equipment can fall out causing injury.	Completely remove the equipment or use an equipment lift for support while repairing.
Plugging in computer equipment	Possible fire hazard or shock due to change in voltage configuration.	Plugging or unplugging of computers into power outlets must be arranged in advance with Data Center Operations.
Removing/replacing floor tiles Note: Fermilab personnel should not remove floor tiles except by prior arrangement with Data Center Operations.	<p>Unmarked open floor areas could result in a person falling into open floor causing injuries.</p> <p>Lifting floor tiles could cause back injury. Handling floor tiles could cause pinch or cut to hands.</p>	Encircle open floor tile area with yellow safety cones available at entrance doors. Place safety cones on loose tiles to prevent tripping over them. When floor tiles are replaced, ensure that they are fully seated and do not have any edges rising above adjacent tiles. If this is not possible, place safety cones around tile and contact Data Center Operations. Use floor tile pullers provided at entrance doors. Use standup floor tile pullers whenever possible. For vented floor tiles, use special hook puller and wear leather or cloth gloves when handling these tiles. (Use Tool Loan Form when applicable).
Working underneath floor Note: Fermilab personnel should not do work under raised floors except by prior arrangement with Data Center Operations.	Electrical cables could cause electric shock if shielding is broken.	Exercise care so as not to pull on cables which could break shielding

Using plug-in electrically powered tools	Electric shock potential	Use GFCI cord available from Data Center Operations.
Working in aisles	Potential for trip hazard or aisle blockage for emergency exiting	Ensure cables, carts, etc. do not restrict pathways to less than 28". Cables should not be strung across aisles.
Working in tape robots.	Quick, moving components within the tape library can cause serious injury.	Follow specific lockout/tagout procedure if required. Individuals must receive Fermilab's lockout/tagout training. Follow vendor safety procedures and specific hazard analysis if it is necessary to troubleshoot equipment that is live.
Combustibles: packing materials and flammables	Potential for fire/eye hazard from debris in areas with high air velocity	Cardboard and packing materials are not allowed in computer rooms. If necessary, contact Data Center Operations. Although not required, safety glasses are available at the Site 38 stockroom and can be charged to the division's safety task code. Flammables, such as alcohol, are not permitted except for duration of use.

